

## C L A I M S

1. A method for detection of micrometric and sub-micrometric images by means of irradiation of a mask or of a biological specimen with ionizing radiation, characterized in that said ionizing radiation has an energy comprised between 20 and 2000 eV, and in that it comprises a detector consisting of LiF designed to receive said ionizing radiation.
2. The method according to Claim 1, characterized in that said ionizing radiation deposits on said detector a power  $\geq 10$  mW/cm<sup>3</sup>.
3. The method according to Claim 1 or Claim 2, characterized in that said ionizing radiation is generated by a plasma-laser system.
4. The method according to Claim 3, characterized in that said plasma-laser system comprises a pulsed excimer laser and a strip of target material.
5. The method according to Claim 4, characterized in that said pulsed excimer laser is an XeCl laser.
6. The method according to any one of the preceding claims, characterized in that said detector is a LiF film.
7. The method according to any one of the preceding claims, characterized in that said mask or said biological specimen is set in contact with said LiF detector.
8. The method according to any one of Claims 1 to 6, characterized in that it uses multilayer mirrors designed to reproduce in projection said mask or said biological specimen on said detector.

9. A device for detection of micrometric and sub-micrometric images for irradiation of a mask or of a biological material with ionizing radiation, characterized in that it uses a method according to any one of the preceding claims.

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10. The device according to Claim 9, characterized in that it enables micro-radiography or x-ray microscopy.

11. The device according to Claim 9, characterized in that it  
10 enables configurations for optical devices to be obtained.